

REMARKS

Summary of the Office Action

Claims 1-3, 8-13, 16, and 21-24 are pending in this application.

Claims 1-3, 8 and 21 have been rejected as obvious over U.S. Patent No. 6,120,534 to Ruiz ("Ruiz") in view of European Patent No. 0 779 062 to Glastra et al. (*Glastra*).

Claims 1-3, 8, 13, 16, and 23-24 have been rejected as obvious over *Glastra* in view of German Patent No. 195 09 464 to Jäger ("Jäger").

Claim 10 has been rejected as obvious over *Glastra* in view of *Jäger* and further in view of U.S. Patent No. 5,695,498 to Tower ("Tower").

Claim 22 has been rejected as obvious over *Glastra* in view of *Jäger* and further in view of U.S. Patent No. 5,843,116 to Crocker ("Crocker").

The specification has been objected to as failing to provide proper antecedent basis to certain claim language.

Applicant's Response

A. In the Specification

Applicant has amended paragraph [0021] of the specification, to create proper antecedent basis to the claims. Support for this amendment can be found in the remainder of the specification, e.g. at FIG. 3.

B. In the Claims

Applicant has amended independent claim 1 to patentably distinguish the present invention over the prior art of record. In particular, independent claim 1 has been amended to recite that the stent-catheter arrangement includes "a catheter including an expandable balloon having a first essentially tubular section expandable to engage an interior vessel wall, a second essentially tubular section expandable to engage the interior vessel wall, and an essentially tubular segment of reduced expandability in comparison with said first and second essentially tubular sections, said essentially tubular segment of reduced expandability being provided between said first and second essentially tubular sections, each of said first and the second essentially tubular sections being connected to said segment of reduced expandability by a tapered section." Support for this recitation can be found in the specification, for example, at FIG. 2.

1. The Rejection of Claims 1-3, 8 and 21 over Ruiz in view of Glastra

A prima facie case of obviousness requires: (1) a suggestion or motivation to combine; (2) a reasonable expectation of success; and (3) a teaching or suggestion of all claim limitations in the prior art. *Brown & Williamson Tobacco Corp. v. Philip Morris*, 229 F.3d 1333, 1342 (Fed. Cir. 2003); *In re Regal*, 526 F.2d 1399, 1403 (C.C.P.A. 1975).

Because the combination of *Ruiz* and *Glastra* does not teach or suggest all the limitations of independent claim 1, and of claims 2-3, 8 and 21 depending therefrom, the rejection of independent claim 1 as obvious over *Ruiz* in view of *Glastra* is respectfully traversed.

The Examiner has cited *Ruiz* as disclosing Applicant's invention except for the use of a single balloon for expanding the stent. Applicant notes that this is not correct.

Ruiz teaches a stent having two opposing portion 11 and 12 connected by a choke point 13. More particularly, *Ruiz* teaches that the opposing portions are "lobed or conical." *Ruiz*, col. 3, lines 36-37; FIGS. 2A-2B. Therefore, *Ruiz* does not teach stent formed to have "first and second essentially tubular fixing portions."

Ruiz also teaches that the portion comprised between the end portions is choke point 13, that is, a single narrow point and not an "essentially tubular portion having a smaller outer radial width than said first and second expanded fixing portions." This feature is particularly relevant, because a stent configured like in *Ruiz* would increase turbulence in the blood stream, affecting blood speed.

The deficiencies in *Ruiz* are not cured by combining *Ruiz* with *Glastra*. The Examiner has cited *Glastra* as teaching the use of "a balloon 26 with two fully expandable sections 27 and a section of reduced expandability between the expandable sections and thus has first and second tapering portions." Applicant acknowledges that *Glastra* teaches, at col. 2, lines 47-53, that the balloon has a narrower central portion and larger end portions. *Glastra* still does not teach a balloon having "a first essentially tubular section expandable to engage an interior vessel wall, a second essentially tubular section expandable to engage the interior vessel wall, and an essentially tubular segment of reduced expandability in comparison with said first and second essentially tubular sections," because the *Glastra* balloon is structured to fully expand after the tapered terminal sections of the stent, as

clearly seen in FIG. 6 (showing rounded end sections). This is consistent with the teachings of *Glastra*, which is concerned only with providing a stent having tapered end portions, and not essentially tubular end portions extending from the tapered portions.

Based on the foregoing, the withdrawal of the rejection of claims 1-3, 8 and 21 over *Ruiz* in view of *Glastra* is respectfully requested.

2. The Rejection of Claims 1-3, 13, 16, and 23-24 over Glastra in view of Jäger

Glastra has been discussed above. The Examiner has characterized *Jäger* as teaching a liquid impermeable cover over the stent or a stiffening element for forming a reduced expandable section.

While *Jäger* teaches the use of a layer over the stent, the combination of *Glastra* and *Jäger* does not teach or suggest all the elements of Applicant's invention due to the deficiencies in *Glastra* indicated in the previous section.

Additionally, *Jäger* does not teach "said segment of said balloon of said reduced expandability is formed by a stiffening element applied to expandable material of said balloon," because *Jäger* teaches that "Die Einshnürung 5 kann beispielweise von einem eng um den Schlauch gewickelten Draht oder einer Federklammer fixiert sein," which Applicant understands to mean that "the chokepoint 5 can for example be stabilized by a wire wound around the chokepoint 5 or by a spring clip." Therefore, *Jäger* does not teach the forming of the stent by stabilizing the central portion of the balloon, but by pre-stabilizing the central portion of the stent.

Based on the foregoing, the withdrawal of the rejection of claims 1-3, 13, 16, and 23-24 over *Glastra* in view of *Jäger* is respectfully requested.

3. The Rejections of Claim 10 over *Glastra* in view of *Jäger* and *Tower*, and of Claim 22 over *Glastra* in view of *Tower* and *Crocker*

Glastra and *Jäger* have been discussed above. The Examiner has characterized *Tower* as teaching that the balloon is formed of stiffened balloon material and that the reduced expandability of the balloon is formed during balloon production. The Examiner ha further characterized *Crocker* as teaching that stiffening material may be integrated in the balloon.

For the sake of brevity, regardless of the applicability of *Tower* and/or *Crocker*, Applicant submits that the additions of *Tower* and/or *Crocker* to the teachings of *Glastra* and *Jäger* still does not cure the deficiencies of *Glastra* and *Jäger*, at least because *Tower* and/or *Crocker* do not add the limitations missing in the *Glastra-Jäger* combination to produce Applicant's invention, for the reasons discussed above.

Based on the foregoing, the withdrawal of the rejection of claims 10 and 22 over *Glastra* in view of *Jäger*, *Tower* and/or *Crocker* is respectfully requested.

Conclusion

In view of the foregoing amendment and comments,
Applicant respectfully submits that the application is now in
condition for allowance. Reexamination and reconsideration of
the pending claims are respectfully requested.

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Respectfully submitted,

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